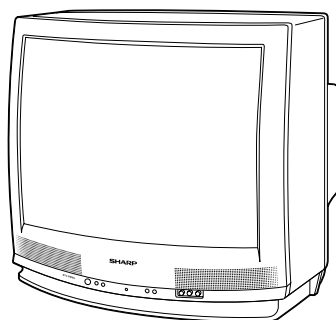


# SHARP

# SERVICE MANUAL



## COLOR TELEVISION

**Chassis No. SN-010**

## MODEL

# 27R-S100

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

## CONTENTS

CONTENTS		Page
● ELECTRICAL SPECIFICATIONS .....		1
● IMPORTANT SERVICE SAFETY PRECAUTION .....		2
● LOCATION OF USER'S CONTROL .....		4
● INSTALLATION AND SERVICE INSTRUCTIONS .....		5
● CHASSIS LAYOUT .....		11
● BLOCK DIAGRAM .....		12
● SCHEMATIC DIAGRAMS .....		13
● PRINTED WIRING BOARD ASSEMBLIES .....		18
● REPLACEMENT PARTS LIST .....		23
● PACKING OF THE SET .....		31

## ELECTRICAL SPECIFICATIONS

POWER INPUT .....	120 V AC 60 Hz
POWER RATING .....	105 W
PICTURE SIZE .....	2,187cm <sup>2</sup> (339sq inch)
CONVERGENCE .....	Magnetic
SWEEP DEFLECTION .....	Magnetic
FOCUS .....	Hi-Bi-Potential Electrostatic
INTERMEDIATE FREQUENCIES	
Picture IF Carrier Frequency .....	45.75 MHz
Sound IF Carrier Frequency .....	41.25 MHz
Color Sub-Carrier Frequency .....	42.17 MHz
	(Nominal)
AUDIO POWER	
OUTPUT RATING .....	1.5W + 1.5W (at 10% distortion
	and Dual CH Operate)

**SPEAKER**  
 SIZE ..... 8 cm (Round)  
 VOICE COIL IMPEDANCE ..... 32 ohm at 400 Hz

**ANTENNA INPUT IMPEDANCE**  
 VHF/UHF ..... 75 ohm Unbalanced

**TUNING RANGES**  
 VHF-Channels ..... 2 thru 13  
 UHF-Channels ..... 14 thru 69  
 CATV Channels ..... 1 thru 125

(EIA, Channel Plan U.S.A.)

**Specifications are subject to change without prior notice.**

# SHARP CORPORATION

This document has been published to be used for after sales service only.  
The contents are subject to change without notice.

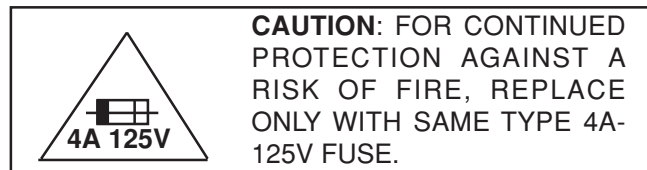
## IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

### WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.

To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



### SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

**When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)**

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

### X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.

It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.

2. It is essential that servicemen have available at all times an accurate high voltage meter. The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value –no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver. Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

# IMPORTANT SERVICE SAFETY PRECAUTION

## (Continued)

### BEFORE RETURNING THE RECEIVER

#### (Fire & Shock Hazard)

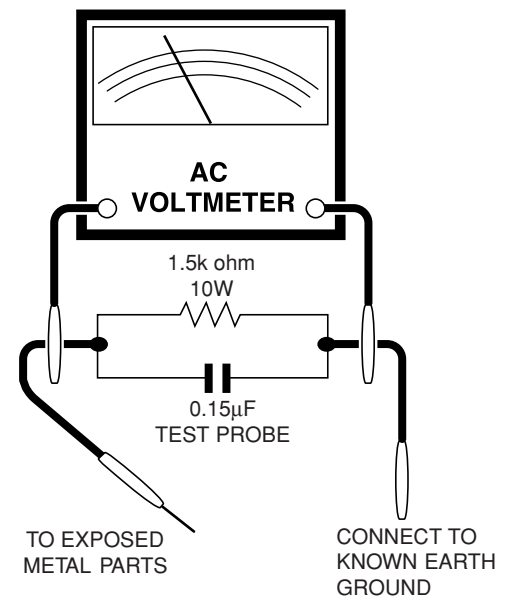
Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators and etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
  - Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
  - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15 $\mu$ F capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
  - Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.

- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon and etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)

Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



### SAFETY NOTICE

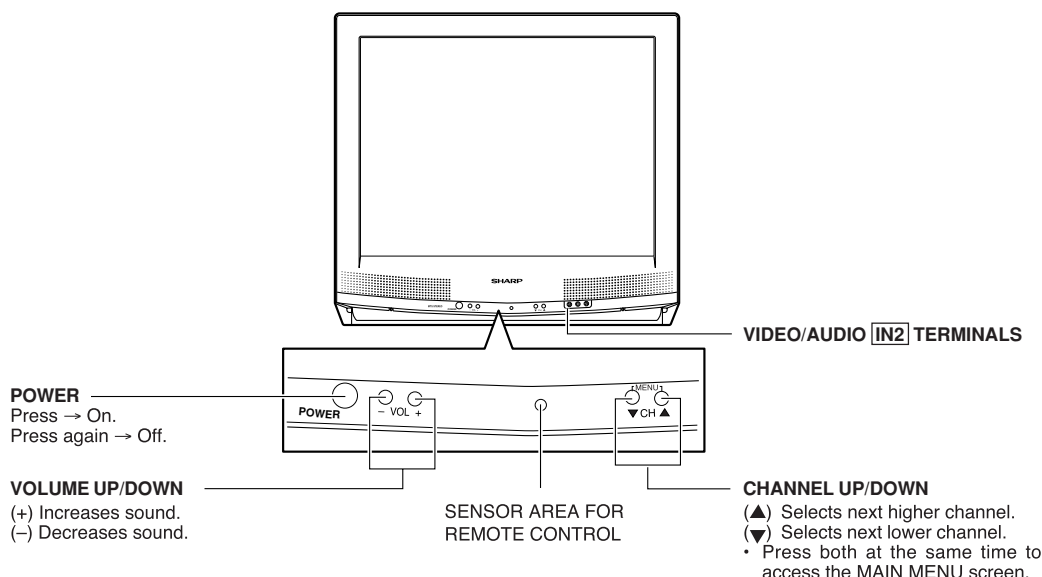
Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by " $\triangle$ " and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

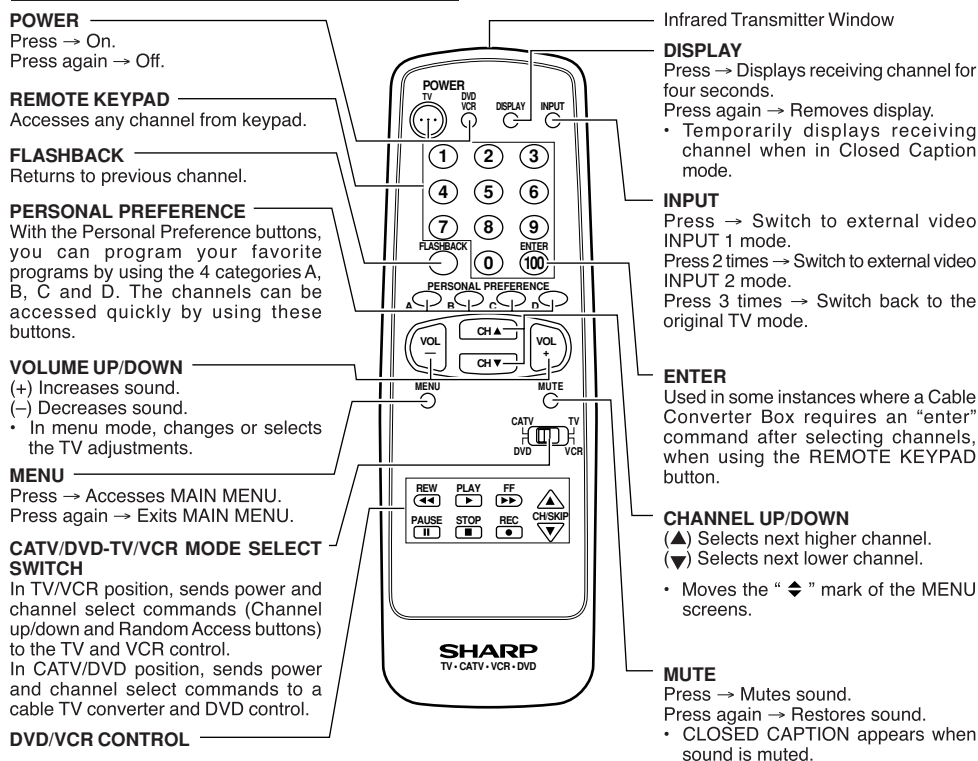
For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

# LOCATION OF USER'S CONTROL

## Front Panel



## Basic Remote Control Functions



### Note:

- The above shaded buttons on the Remote Control glow in the dark. To use the glow-in-the-dark display on the remote control, place it under a fluorescent light or other lighting.
- The phosphorescent material contains no radioactive or toxic material, so it is safe to use.
- The degree of illumination will vary depending on the strength of lighting used.
- The degree of illumination will decrease with time and depending on the temperature.
- The time needed to charge the phosphorescent display will vary depending on the surrounding lighting.
- Sunlight and fluorescent lighting are the most effective when charging the display.

# INSTALLATION AND SERVICE INSTRUCTIONS

- Note:** (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.  
 (2) Before performing adjustments, the TV set must be on at least 15 minutes.

## CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

## X-RADIATION PROTECTOR CIRCUIT TEST

**After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:**

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP653 and make sure that the voltmeter reads  $21.9 \pm 1.4V$ .
5. Apply external 27.9V DC at TP653 by using an external DC supply, TV must be shut off.
6. To reset the protector, unplug the AC cord and make a short circuit between TP651 and TP652. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

## HIGH VOLTAGE CHECK

**High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:**

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "S03" and Bus data "01" (Y-mute on).
4. The voltage should be approximately, 30.5kV (at zero beam).

If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

**Note:** There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required.

**To enter the service mode and exit service mode.**

While pressing the Vol-up and Ch-up buttons at the sametime, plug the AC cord into a wall socket.

Now, the TV set is switched on and enters the service mode.

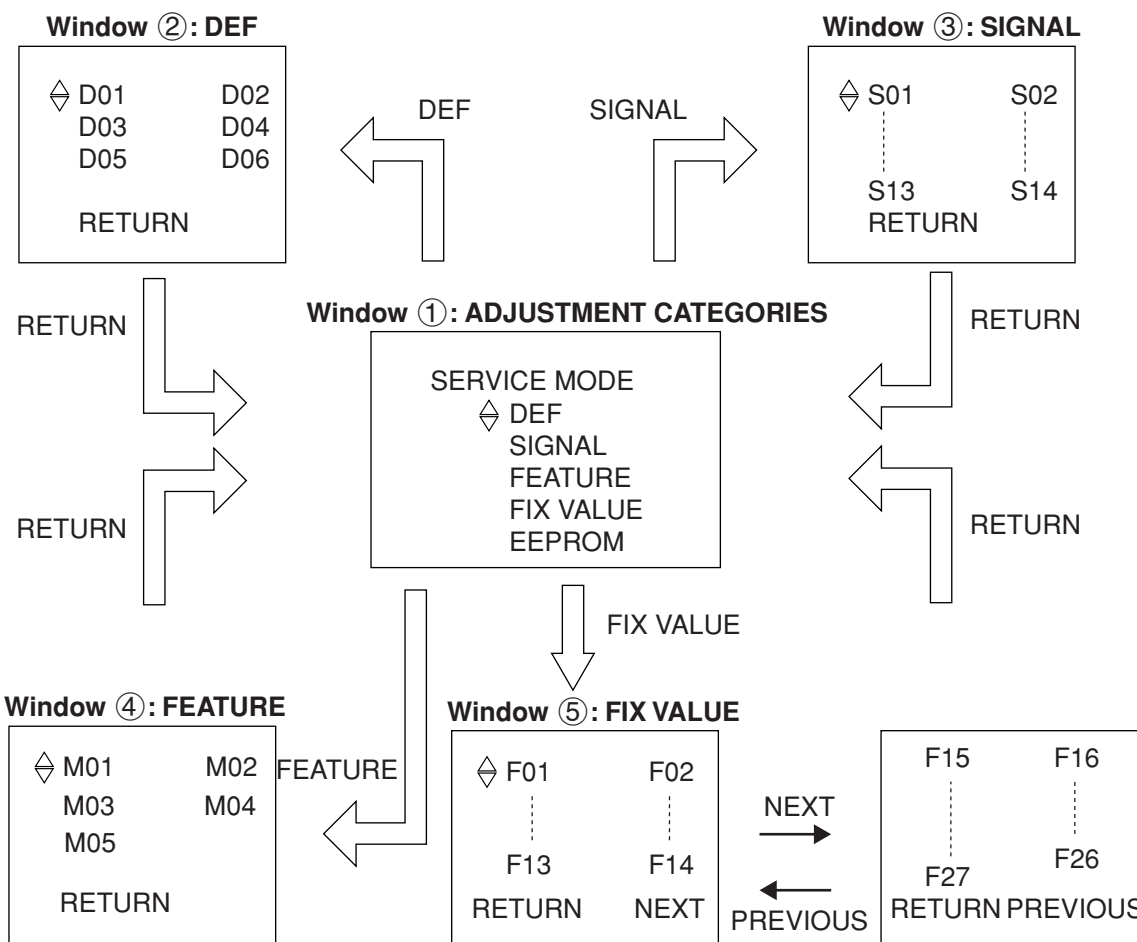
To exit the service mode, turn the television off by pressing the power button.

## 1. Service mode.

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer control are in their proper (reset) position.

## 2. Service number selection.

In the service mode, you will see the window screen as window ①. There are 4 adjustment categories ②DEF, ③SIGNAL, ④FEATURE, ⑤FIX VALUE as show in **Figure A**.



**Figure A: ADJUSTMENT CATEGORIES**

Press CH UP/DOWN button for selection and enter by VOL UP or VOL DOWN.

Press CH UP/DOWN button to select the adjustment item and VOL UP/DOWN to adjust the data number for each categories.

**(OSD disturbance can be erased by R/C display key)**

**(Note: EEPROM - factory used only)**

Below are the adjustments ranges and initial values for FIX VALUE category.

## FIX VALUE

SERVICE POSITION	ADJUST ITEM	DATA		
		RANGE	INITIAL VALUE	(Hex)
F01	OPTION 1	00-FF	B3	B3
F02	OPTION 2	00-FF	07	27
F03	E-SAVE	00-3F	2A	2A
F04	TUNER SETUP	00, 01	00	00
F05	R-TONE RD	00-7F	03	03
F06	R-TONE BD	00-7F	7C	7C
F07	B-TONE RD	00-7F	00	00
F08	B-TONE BD	00-7F	04	04
F09	FM LEVEL	00-1F	16	16
F10	AFC GAIN	00, 01	00	00
F11	G DRIVE	00, 0F	0F	0F
F12	FBT BLK SW	00, 01	01	01
F13	V COMP	00-07	07	07
F14	OSD CONT	00-03	01	01
F15	SHARPNESS	00-3F	0D	*1
F16	FLT SYS	00-07	01	01
F17	KILLER OP	00-07	02	02
F18	PRE SHOOT	00-03	00	00
F19	CORING	00-03	04	04
F20	DC REST	00-03	02	02
F21	BS START	00-03	01	01
F22	BS GAIN	00-03	01	01
F23	ABL START	00-07	00	00
F24	R/B ANGLE	00-0F	08	08
F25	H BLK R	00-0F	03	03
F26	H BLK L	00-0F	00	00
F27	YC	00-07	05	04

\*1: type of tuner

TUNER TYPE	CRT	
	A68ADT2506	A68QDN891X
VTUVTST5UF770	13	15
VTUENV56D82-1	18	1A
VTUENV56DA1G3	18	1A
VTUVTST5UF670	13	15
VTUVTST5UF740	13	15

**Table - A**

Below are the ranges and initial values for each adjustment and in each categories.

## DEF

SERVICE POSITION	ADJUST ITEM	DATA		ADJUSTMENT CONTENTS
		RANGE	INITIAL VALUE	
D01	H-PHASE	00-1F	0C	
D02	V-SIZE	00-7F	40	
D03	V-POSITION	00-3F	20	
D04	CC-POSITION	00-FF	1A	
D05	V-LINEARITY	00-1F	10	Must be "13"
D06	V-S-CORRECTION	00-1F	10	Must be "14"

**Table - B**

**SIGNAL**

SERVICE POSITION	ADJUST ITEM	DATA		ADJUSTMENT CONTENTS
		RANGE	INITIAL VALUE	
S01	RF AGC	00-3F	14	
S02	VIDEO LEVEL	00-07	03	Must be "4"
S03	Y-MUTE	00-03	00	"01": Y-MUTE, "02": V-STOP & Y-MUTE "03": Activate color killer circuit.
S04	SUB BIAS	00-FF	30	Must be "30"
S05	R-BIAS	00-FF	00	
S06	G-BIAS	00-FF	00	
S07	B-BIAS	00-7F	00	
S08	R-DRIVE	00-7F	53	
S09	B-DRIVE	00-7F	53	
S10	CONTRAST	00-7F	5A	
S11	TINT	00-7F	40	
S12	COLOR	00-7F	40	
S13	BRIGHTNESS	00-7F	40	
S14	BRIGHTNESS 2	00-7F	40	

**Note:** Refer to the SERVICE ADJUSTMENT for each corresponding values.

**Table - C****FEATURE**

SERVICE POSITION	ADJUST ITEM	DATA		ADJUSTMENT CONTENTS
		RANGE	INITIAL VALUE	
M01	MS LEVEL	00-0F	0A	
M02	MTS-VCO	00-3F	20	
M03	FILTER	00-3F	1C	
M04	LOW SEPARATION	00-3F	20	
M05	HIGH SEPARATION	00-3F	1B	

**Note:** Refer to the SERVICE ADJUSTMENT for each corresponding values.

**Table - D**

Holding down both the Vol-up/Ch-down buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2102.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2102.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201.
IC2102	X		Holding down both the Vol-up/Ch-down buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2102.
IC3001	X		Adjust items related MTS only.
CRT	X		Adjust items related to picture tube only.

**Table - E**



## ■ SERVICE ADJUSTMENT

**Note:** Before making the service adjustment, make the bus data settings.

### +B Adjustment

#### (1) For the chassis with the +B adjustment control

1. Receive a good local channel.
2. Select VIDEO ADJUSTMENT RESET on the menu to get the video reset.
3. Connect a DC voltmeter between the +B line (at SW transformer) of R611 and the ground terminal.
4. Adjust R738 so that the voltmeter should read  $128.5 \pm 0.5V / -0.25V$ .

#### (2) For the chassis without the +B adjustment control

1. Receive a good local channel.
2. Select VIDEO ADJUSTMENT RESET on the menu to get the video reset.
3. Connect a DC voltmeter between the +B line (at SW transformer) of R611 and the ground terminal.
4. Make sure that the voltmeter reads  $128.5 \pm 1.5V$ .

### Video Level (TV Det Video Level)

#### Adjustment

1. Receive a good local channel.
2. Enter the service mode signal category and select the service adjustment "S02".
3. Set the data value to "02" first, then adjust the data to "04". (If out of spec, readjust the data in the range of "00" to "07" to obtain a normal contrast level.)

### RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode signal category and select the service adjustment "S01".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

**Note:** You have to exit the service mode first to select another channel.

### Screen Adjustment

1. Connect to oscilloscope probe between TP854 and ground of the CRT unit.
2. Receive a good local channel.
3. Enter the service mode Signal category and set the service adjustment "S04" to step 30. Then select the service adjustment "S12" and set the data value to "00" to set the color level to the minimum level. (record the original data first). You may skip this step, if you selected a B/W picture or monoscope pattern. Set also the "S05/S06/S07" data to minimum level ("00").

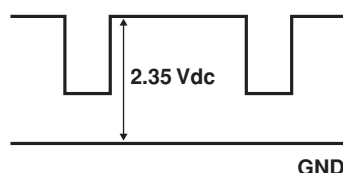


Figure B: WAVEFORM FOR SCREEN ADJUSTMENT

4. Select the service adjustment "S03" and set the data value to "01" to turn off the luminance signal (Y-mute).
5. Select the service adjustment "S14" and adjust the data value to obtain 2.35 volts as shown in **Figure B**.
6. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
7. Adjust the service adjustment "S05" red, "S06" green, "S07" blue to obtain a good grey scale with normal white at low brightness level.
8. Select the service adjustment "S03" and reset data to "00". Select the service adjustment "S12" and reset data to obtain normal color level.
9. Remove probe and reset the master screen control to obtain normal brightness range.

### White Balance Adjustment

1. Receive a good local channel.
2. Select the service adjustment "S12" and set the data value to "00" to set the color level to the minimum. You may skip this step, if you selected a B/W picture or monoscope.
3. Alternately adjust the service adjustment data of "S08" and "S09" until a good grey scale with normal white is obtained.
4. Select the service adjustment "S12" and reset data to obtain normal color level.

### Sub-Picture Adjustment

1. Receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select the service adjustment "S10".
4. Adjust the data value to achieve normal contrast range.

### Sub-Tint Adjustment

1. Receive a good local channel.
2. Set the customer tint control to the center of its range.
3. Enter the service mode and select the service adjustment "S11".
4. Adjust "S11" data value to obtain normal fresh tones.

### Sub-Color Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position.
3. Enter the service mode and select the service adjustment "S12".
4. Adjust "S12" data value to obtain normal color level.

### Sub-Brightness Adjustment

1. Receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select the service adjustment "S13".
4. Adjust "S13" data value to obtain normal brightness level.

## Vertical-Size, V-Linearity and V-S Correction Adjustments

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D02" for Vertical Size, "D05" for V-Linearity and "D06" for V-S Correction Adjustment.
3. Set in order "D05" for V-Linearity, "D06" for V-S Correction and set the data to get the best linearity.
4. Then adjust "D02" data until it become a proper vertical size.

## Horizontal Position Adjustment

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D01".
3. Adjust "D01" data value to center the picture.

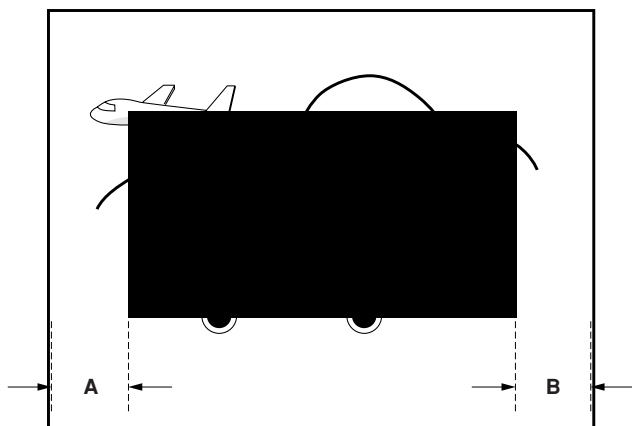
## Vertical-Phase Adjustment

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D03".
3. Adjust "D03" bus data to get the most acceptable vertical position.

**Note: The step range is 20 (32)+12 (3 steps)/  
-20 (5 steps).  
(Push once move 4 steps.)**

## Caption Position Adjustment (Horizontal)

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D04".
3. A black text box will appear on the screen. (see **Figure C.** below)
4. Adjust "D04" data value to balance the text box position in the center. (A=B).



**Figure C.**

## ■ MTS ADJUSTMENT

### MTS Level Adjustment

1. Feed the following monaural signal to pin (14) of IC3001.  
Monaural signal: 300Hz, 245mVrms
2. Connect the rms voltmeter to pin (39) of IC3001.
3. Enter the service mode and select the service adjustment "M01".
4. Adjust the data so that the rms voltmeter reads  $490 \pm 10\text{mVrms}$ .

### MTS VCO Adjustment

1. Keep the unit in no-signal state.
2. Connect the frequency counter to pin (39) of IC3001.
3. Connect a capacitor (100 $\mu\text{F}$ , 50V) in between positive(+) side of C3005 and ground.
4. Enter the service mode and select the service adjustment "M02".
5. Adjust the data so that the frequency counter reads  $62.94 \pm 0.75\text{kHz}$ .

### Filter Adjustment

1. Feed the following stereo pilot signal to pin (14) of IC3001.  
Stereo pilot signal: 9.4kHz, 600mVrms.
2. Enter the service mode and select the service adjustment "M03".
3. Adjust the data at the point where "OK" appears on the screen. The "OK" represents the approximate center of the adjustable range of the data.

### Separation Adjustment

1. Connect the rms voltmeter to pin (39) of IC3001.
2. Receive the following composite stereo signal 1.  
Composite stereo signal: 30% modulation, left channel only, noise reduction on, 300Hz
3. Enter the service mode and select the service adjustment "M04".
4. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
5. Receive the following composite stereo signal 2.  
Stereo signal: 30% modulation, left channel only, noise reduction on, 3kHz
6. Enter the service mode and select the service adjustment "M05".
7. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
8. Take the above steps 1 thru 7 again for fine adjustment.

# CHASSIS LAYOUT

H

G

F

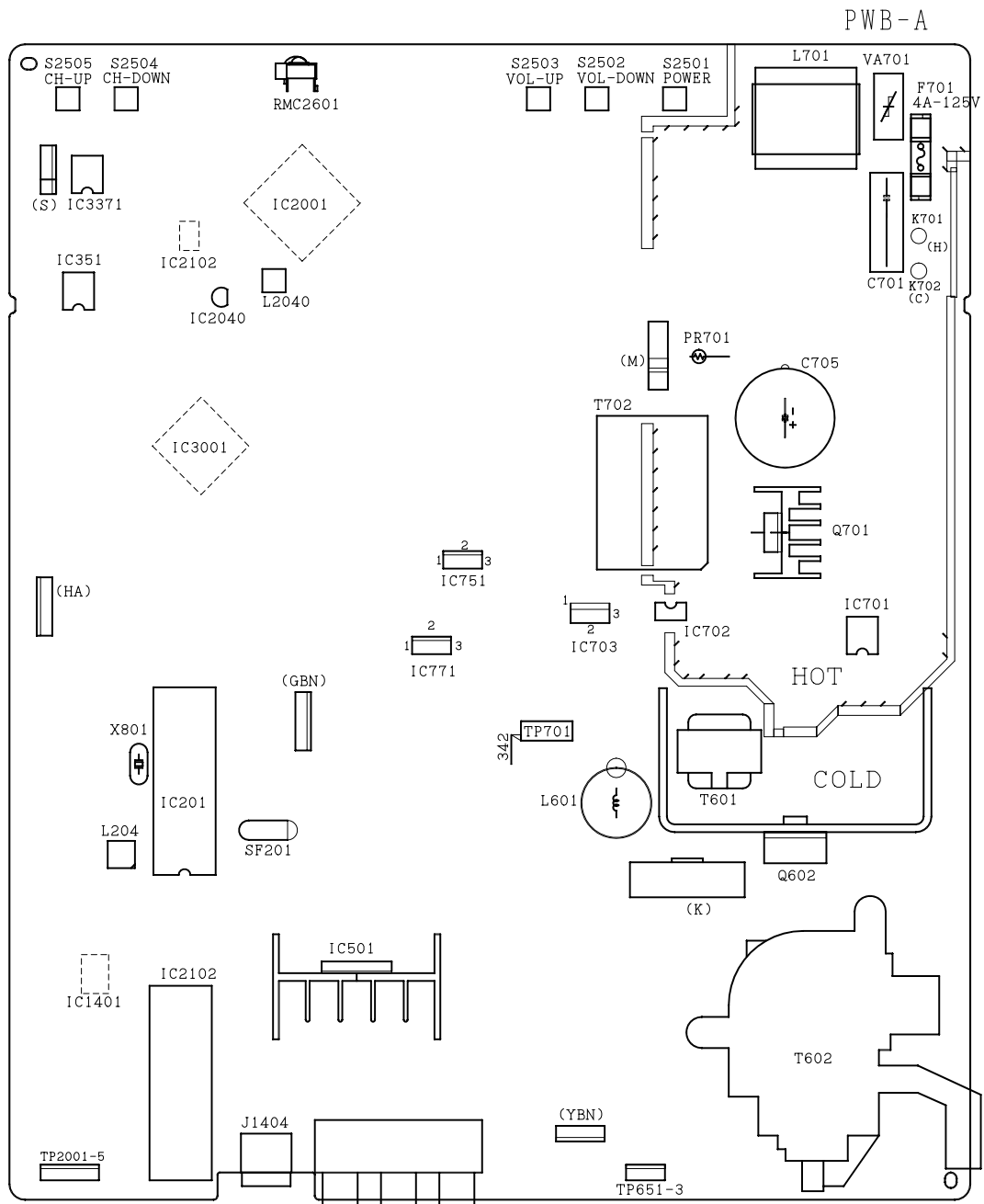
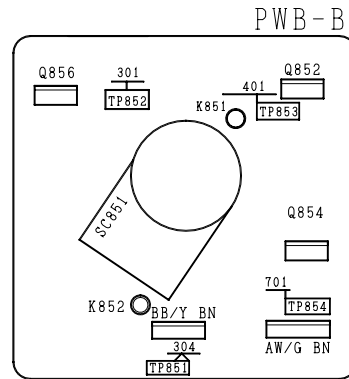
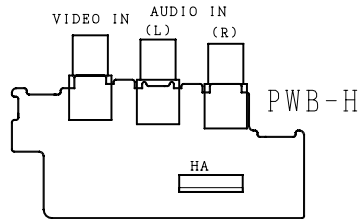
E

D

C

B

A



1

2

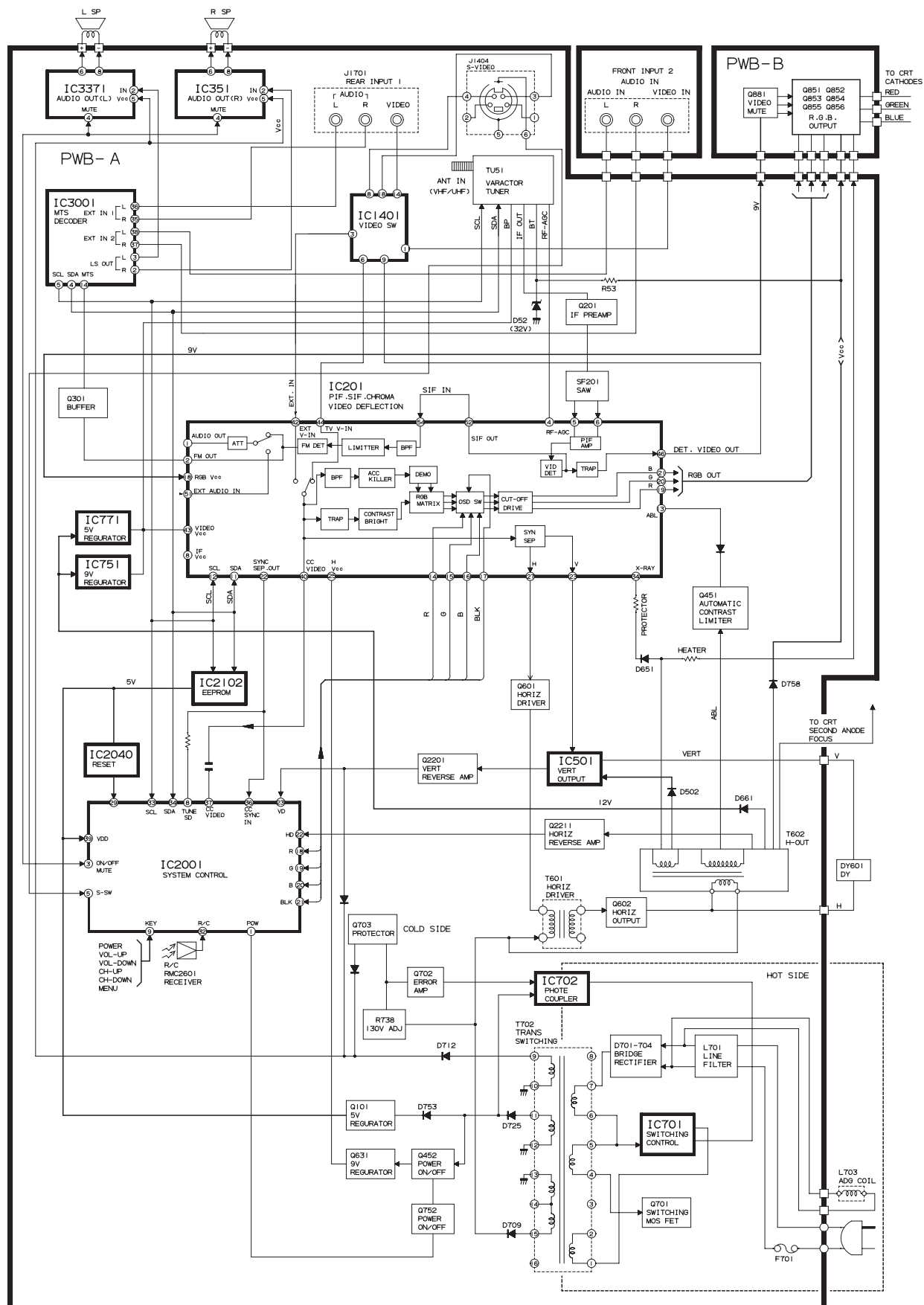
3

4

5

6

## BLOCK DIAGRAM



# DESCRIPTION OF SCHEMATIC DIAGRAM


## NOTES:

1. The unit of resistance "ohm" is omitted.  
( $K=k\Omega=1000\Omega$ ,  $M=M\Omega$ )
2. All resistors are 1/10 watt, unless otherwise noted.
3. All capacitors are  $\mu F$ , unless otherwise noted.  
( $P=pF=\mu\mu F$ )
4. (G) indicates  $\pm 2\%$  tolerance may be used.
5.  $\overline{\text{---}}$  indicates line isolated ground.

## VOLTAGE MEASUREMENT CONDITIONS:

1. All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.
2. All voltages measured with  $1000\mu V$  B & W or Color signal.

## WAVEFORM MEASUREMENT CONDITIONS:

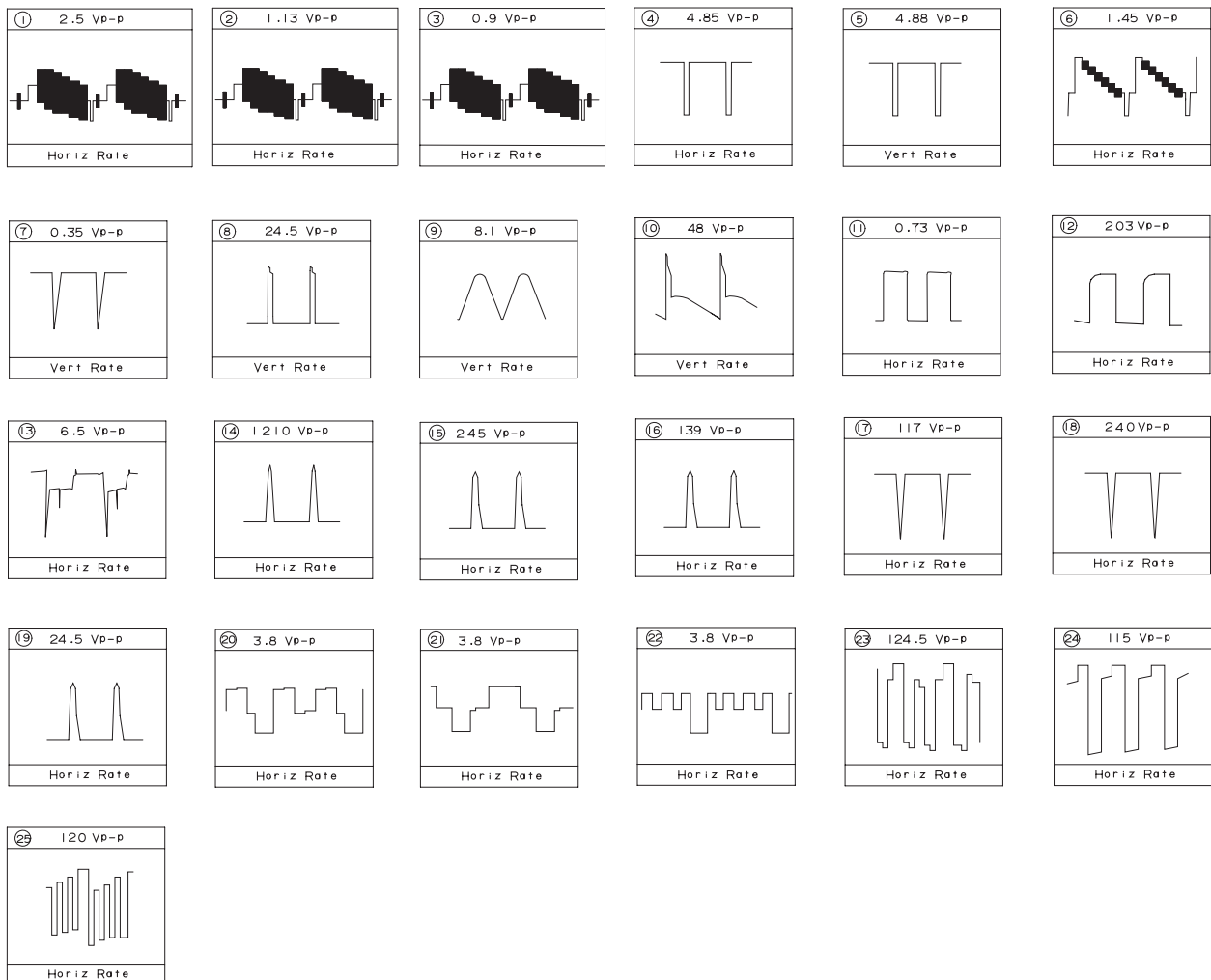
1. Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.
2.  indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)

 AND SHADED (  ) COMPONENTS  
= SAFETY RELATED PARTS.

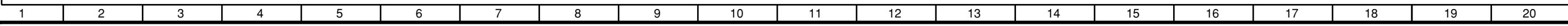
 MARK= X-RAY RELATED PARTS.

This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

# WAVEFORMS



A B C D E F G H I J







# SCHEMATIC DIAGRAM: CRT and FRONT A/V Unit

H

G

F

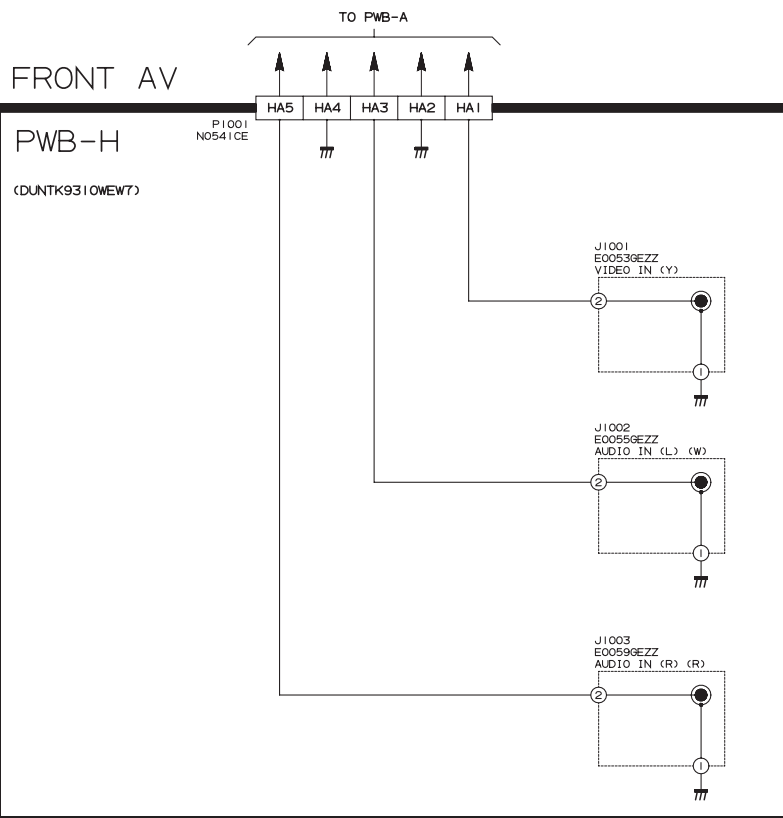
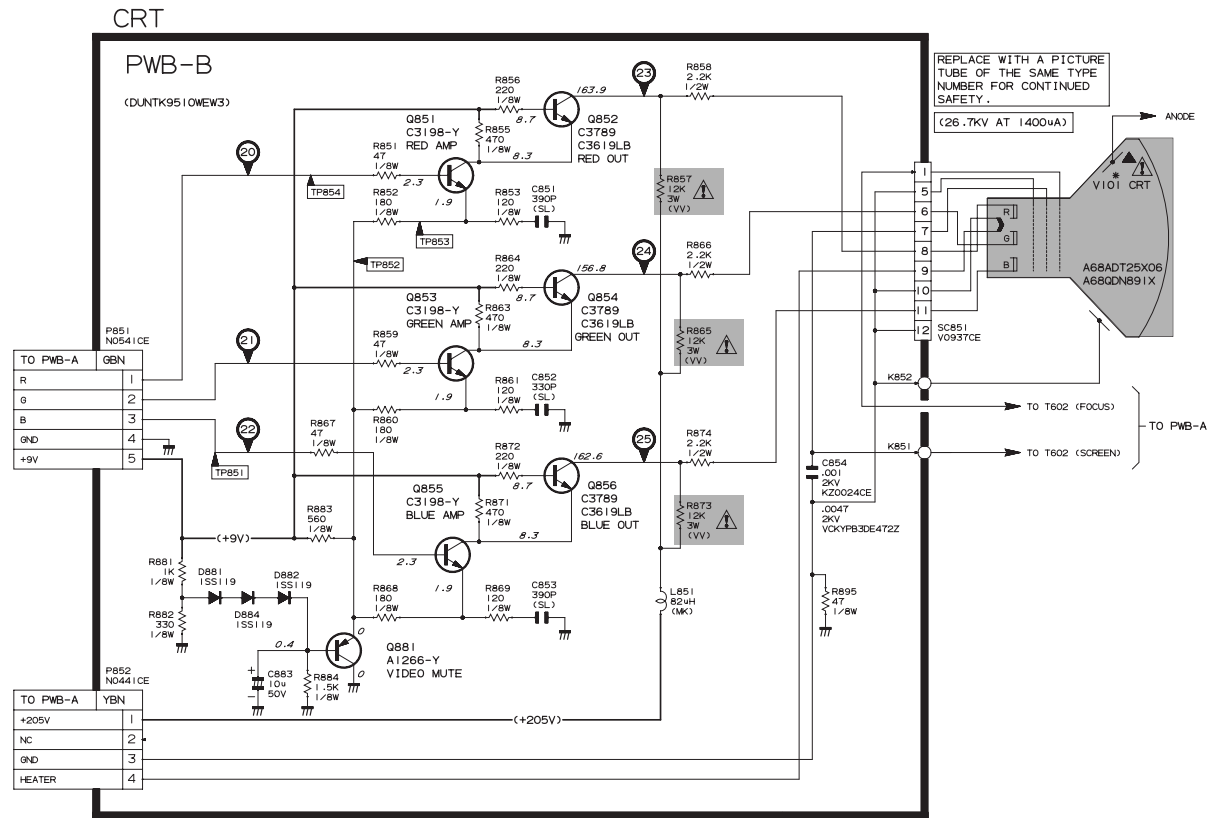
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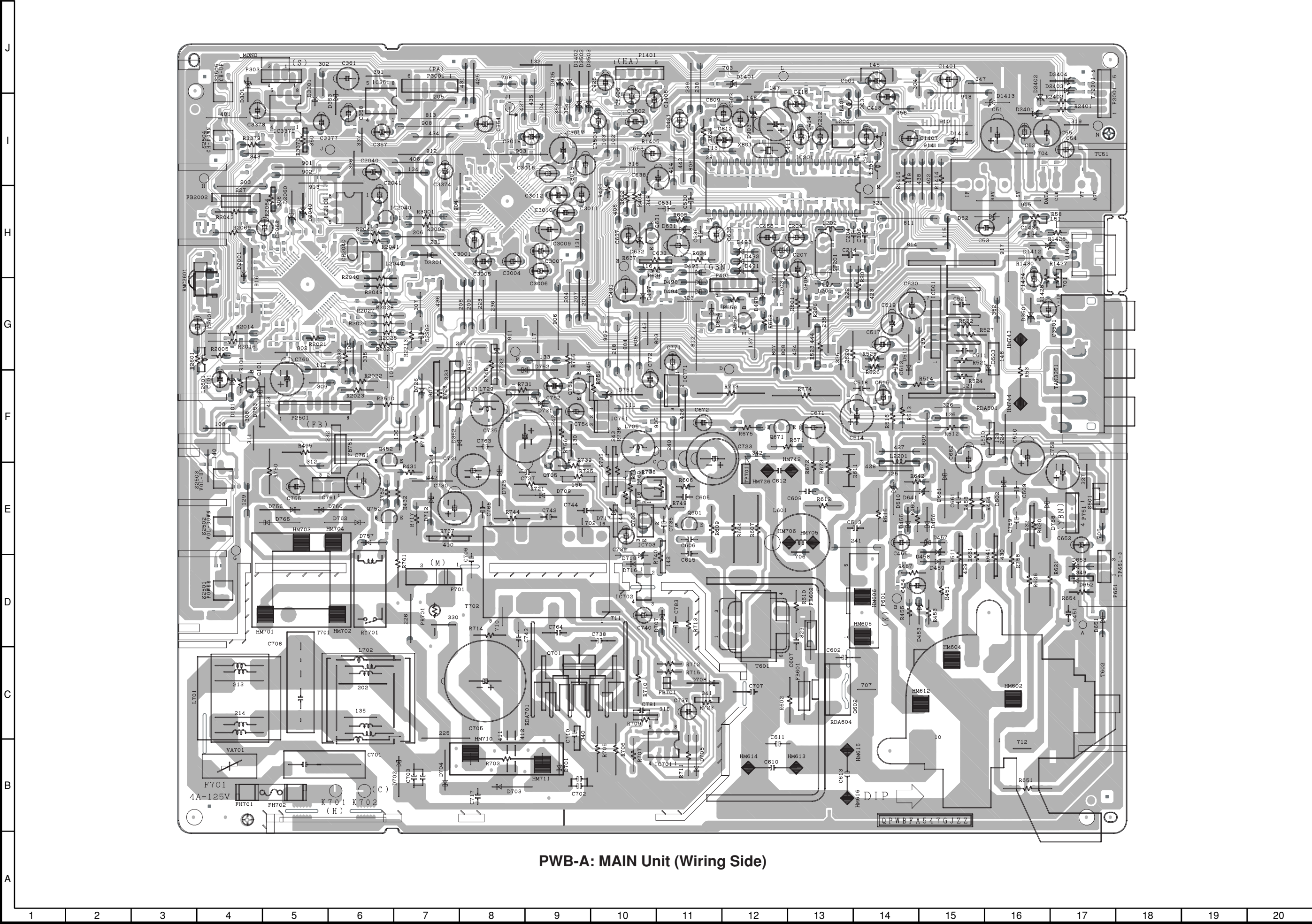
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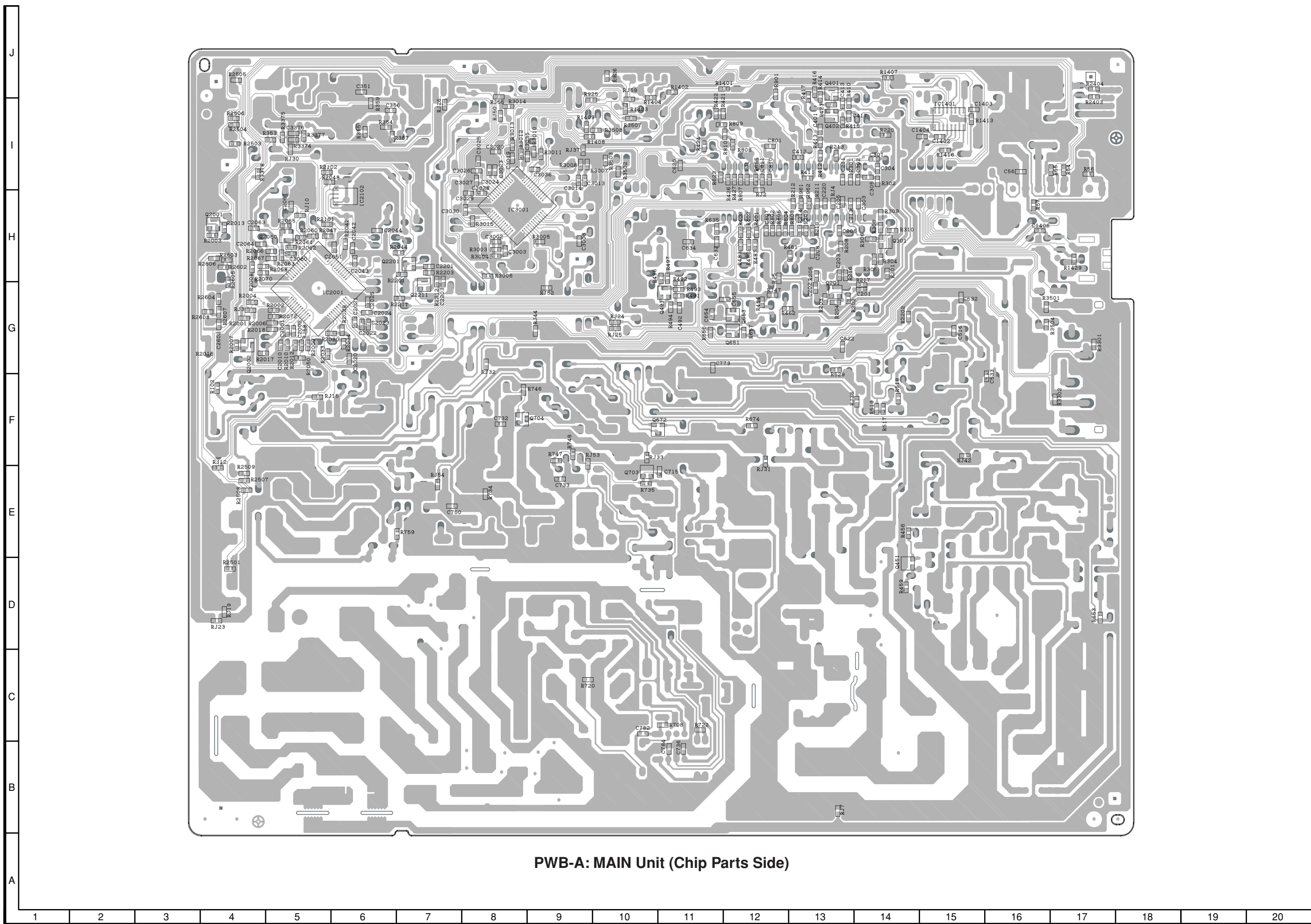
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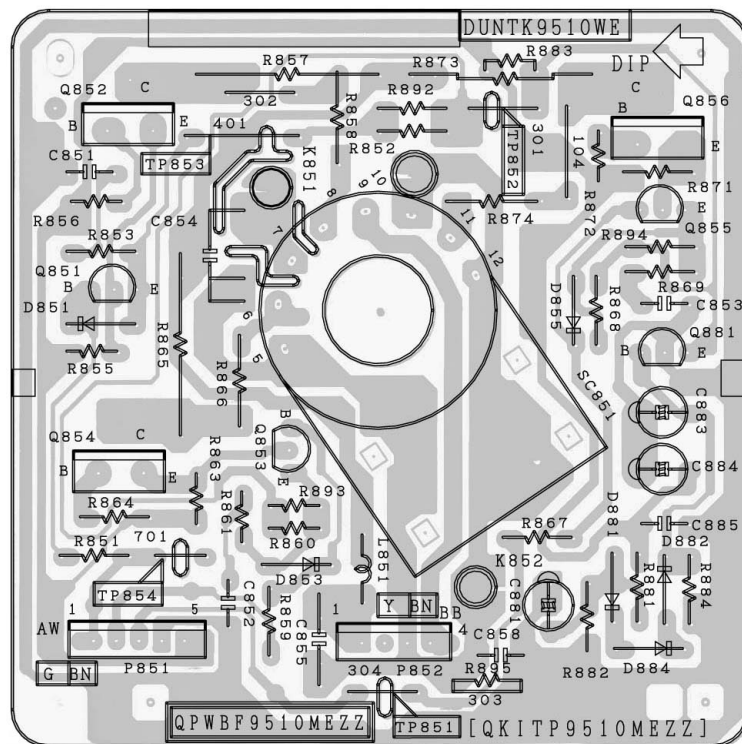
PRINTED WIRING BOARD ASSEMBLIES



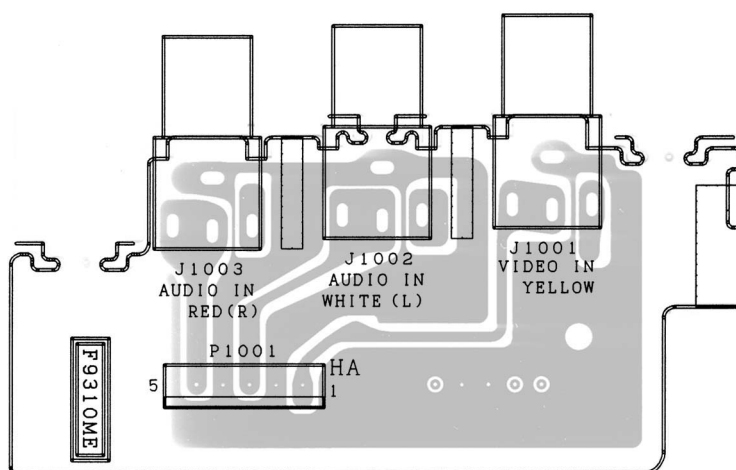
PWB-A: MAIN Unit (Wiring Side)



PWB-A: MAIN Unit (Chip Parts Side)



**PWB-B: CRT Unit (Wiring Side)**



**PWB-H: FRONT A/V Unit (Wiring Side)**



# PARTS LIST

## PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by  $\Delta$  and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does not have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

### "HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

- |                 |                |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO.    |
| 3. PART NO.     | 4. DESCRIPTION |

in **USA**: Contact your nearest SHARP Parts Distributor to order.  
For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★ MARK: SPARE PARTS-DELIVERY SECTION

▲ MARK: X- RAY RELATED PARTS

Ref. No.	Part No.	★	Description	Code
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## PICTURE TUBE

▲ $\Delta$ V101	VB68ADT2506*S	X	Picture Tube (I.T.C)	CK
$\Delta$ L703	RCiLG0038MEZZ	X	Degaussing Coil	AQ
	QEARC2702MEZZ	X	Grounding Strap	AF
	MSPRT0002MEZZ	X	Spring	AE
	QCNW-0239MEZZ	X	Connecting Cord (DY)	AM

	CRT	DY	R626	R621
COMBI-NATION	A68ADT25X06	ITC		1.2/2W
	A68QDN891X	ITC	2.7/1W	-

## PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PWB-A DUNTKA547WEV0	— MAIN Unit	—
PWB-B DUNTK9510WEW3	— CRT Unit	—
PWB-H DUNTK9310WEW7	— FRONT A/V Unit	—

Ref. No. Part No. ★ Description Code

## PWB-A: DUNTKA450WEV2 MAIN UNIT

### TUNER

**NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.**

$\Delta$ TU51	VTUVTST5UF770	J	Tuner	AZ
	or			
	VTUENV56D82-1			

	TU51	R57
COMBI-NATION	VTST5UF770	56K / 1/8W
	ENV56D82-1	56K / 1/8W

### INTEGRATED CIRCUITS

▲△	IC201	RH-iX3354CEN1	J	I.C.	AT
	IC351	VHiAN7511//--1	J	AN7511	AK
△	IC501	VHiLA7841//--1	J	LA7841	AM
△	IC701	VHiTEA1507/-1	J	TEA1507P/N1	AL
△	IC702	RH-FX0034CEZZ	J	PC817	AE

or  
RH-FX0002GEZZ

or  
RH-FX0029CEZZ

$\Delta$ IC703	VHiSE125N/-1	X	SE125N	
$\Delta$ IC751	VHiKA7809AP-1	J	KIA7809API	AE
$\Delta$ IC771	VHiKA7805AP-1	J	KIA7805API	AE

or  
VHiTA7805S/-1

IC1401	VHiM52055FP-1	J	M52055Fp	AH
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IC2001	RH-iX3528CEZZ	X	I.C.	
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IC2040	VHiPST994C/-1	J	Pst994C	AD
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IC2102	VHiBR2416E2-1	J	Br24C16F	AK
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or  
VHiSLA24C16-1

IC3001	VHiCXA2074Q-1	J	Cxa2074Q	AY
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IC3371	VHiAN7511/-1	J	An7511	AK
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### TRANSISTORS

Q101	VS2SC3198-Y-1	J	2SC3198-Y	AA
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or  
VS2SC945AQ/-1

Q201	VS2SC2735//1E	J	2SC2735	AC
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Q301	VS2SD601AR/-1	J	2SD601AR	AC
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or  
VS2SC3928R/-1

Q451	VS2SB709AR/-1	J	2SB709AR	AC
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Q452	VS2SA1266-Y-1	J	2SA1266-Y	AA
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Q491	VS2SB709AR/-1	J	2SB709AR	AC
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$\Delta$ Q601	VS2SC2482/-1	J	2SC2482	AD
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Q602	VS2SD2539//1E	J	2SD2539	AP
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or  
VS2SD2634+-1

Q631	VS2SC3198-Y-1	J	2SC3198-Y	AA
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or  
VS2SC945AQ/-1

Q651	VS2SB709AR/-1	J	2SB709AR	AC
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Q652	VS2SA1266-Y-1	J	2SA1266-Y	AA
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Q653	VS2SD601AR/-1	J	2SD601AR	AC
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$\Delta$ Q701	VSSPP07N60C-1	X	FET	
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or  
VSSPP04N60C-1

or  
VS2SK2708//1E

or  
VS2SK2645//1E

or  
VSSTP6NC60+-1

or  
VSSTP6NC60F-1

or  
VSSTP7NB60F-1

Q704	VS2SD601AR/-1	J	D601AR	AC
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or  
VS2SC3928R/-1

C3928R

Ref. No.	Part No.	★	Description	Code
<b>PWB-A: DUNTKA450WEV2</b>				
<b>MAIN UNIT (Continued)</b>				
Q705	VS2SC3198-Y-1	J	C3198-Y	AA
	or			
	VS2SC945AQ/-1		C945AQ	
Q752	VS2SC3198-Y-1	J	C3198-Y	AA
	or			
	VS2SC945AQ/-1		C945AQ	
Q2001	VS2SD601AR/-1	J	D601AR	AC
	or			
	VS2SC3928R/-1		C3928R	
Q2002	VS2SD601AR/-1	J	D601AR	AC
	or			
	VS2SC3928R/-1		C3928R	
Q2201	VS2SD601AR/-1	J	D601AR	AC
	or			
	VS2SC3928R/-1		C3928R	
Q2211	VS2SD601AR/-1	J	D601AR	AC
	or			
	VS2SC3928R/-1		C3928R	
<b>DIODES</b>				
D52	RH-EX0676GEZZ	J	Zener Diode, 32V	AA
D101	RH-EX0616GEZZ	J	Zener Diode, 5.6V	AA
D353	VHD1SS119//-1	J	Diode	AB
D453	RH-EX0616GEZZ	J	Zener Diode, 5.1V	AA
D455	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
D494	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
D495	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
D496	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
D497	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
△ D502	RH-DX0131CEZZ	J	Diode	AC
D511	RH-DX0441CEZZ	J	Diode	AC
D632	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
△ D641	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
▲▲ D651	VHD1SS244//-1	J	Diode	AB
▲▲ D653	RH-EX0666GEZZ	J	Zener Diode, 27V	AB
D654	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
△ D661	RH-DX0468CEZZ	J	Diode	AE
	or			
	RH-DX0229CEZZ			
△ D701	RH-DX0154CEZZ	J	Diode	AC
	or			
	RH-DX0490CEZZ			
	or			
	RH-DX0279CEZZ			
△ D702	RH-DX0154CEZZ	J	Diode	AC
	or			
	RH-DX0490CEZZ			
	or			
	RH-DX0279CEZZ			
△ D703	RH-DX0154CEZZ	J	Diode	AC
	or			
	RH-DX0490CEZZ			
	or			
	RH-DX0279CEZZ			
△ D704	RH-DX0154CEZZ	J	Diode	AC
	or			
	RH-DX0490CEZZ			
	or			
	RH-DX0279CEZZ			
D707	VHD1SS119//-1	J	Diode	AB

Ref. No.	Part No.	★	Description	Code
	or			
	VHD1SS244//-1			
D708	VHD1SS119//-1	J	Diode	AB
	or			
	VHD1SS244//-1			
△ D709	RH-DX0229CEZZ	J	Diode	AF
△ D712	RH-DX0532CEZZ	X	Diode	
	or			
	RH-DX0523CEZZ			
△ D725	RH-DX0131CEZZ	J	Diode	AC
D726	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
D753	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
△ D758	RH-DX0131CEZZ	J	Diode	AC
D2201	VHD1SS119//-1	J	Diode	AB
	or			
	RH-DX0475CEZZ			
D3301	VHD1SS119//-1	J	Diode	AB
△ VA701	RH-VX0048CEZZ	J	Varistor	AE
	or			
	RH-VX0035CEZZ			
	or			
	RH-VX0019CEZZ			
	or			
	RH-VX0074CEZZ			
<b>PACKAGED CIRCUITS</b>				
△ PR701	RMPTP0092CEZZ	J	Packaged Circuit	AH
X801	RCRSB0001PEZZ	R	Crystal	AL
	or			
	RCRSB0205CEZZ			
<b>FILTERS AND COILS</b>				
CF2040	RFiLA0099CEZZ	J	Filter	AE
	or			
	RFiLC0121GEZZ			
SF201	RFiLC0405CEZZ	J	Filter	AH
L201	VP-XF1R2K0000	J	Peaking 1.2μH	AB
L203	VP-XF220K0000	J	Peaking 22μH	AB
L204	RCiLi0632CEZZ	J	If Coil	AE
L301	VP-XF150K0000	J	Peaking 15μH	AB
L601	RCiLZ0102MEZZ	J	Coil	AH
	or			
	RCiLZ0101MEZZ			
△ L701	RCiLF0078PEZZ	R	Coil	AF
	or			
	RCiLF0025PEZZ			
△ L705	RCiLP0179CEZZ	J	Coil	AD
L2040	RCiLB0131CEZZ	J	Oscillation Coil	AE
<b>TRANSFORMERS</b>				
▲▲ T601	RTRNZ0057PEZZ	R	Transformer	AK
	or			
	RTRNZ0731CEZZ			
▲▲ T602	RTRNF0049MEZZ	X	H-Volt Transformer	
T702	RTRNW0001GJZZ	X	Transformer	
<b>CAPACITORS</b>				
[EL... Electrolytic, M-Poly... Metalized Polypro Film]				
C51	VCEA0A1AW108M	J	1000 10V EL.	AC
C53	VCEA0A1HW105M	J	1.0 50V EL.	AB
C54	VCEA0A1HW475M	J	4.7 50V EL.	AB
C101	VCEA0A1CW476M	J	47 16V EL.	AB
C201	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C202	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C203	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C204	VCQYTA1HM223K	J	0.022 50V Mylar	AB
C205	VCKYCY1HB103K	J	0.01 50V Ceramic	AA
C206	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C207	VCEA0A1CW476M	J	47 16V EL.	AB
C208	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C209	VCEA0A1HW105M	J	1.0 50V EL.	AB

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
<b>PWB-A: DUNTKA450WEV2</b>									
<b>MAIN UNIT (Continued)</b>									
C210	VCEA0A1HW474M	J	0.47 50V EL.	AB	△ C706	RC-EZ0718CEZZ RC-KZ0092GEZZ or RC-KZ021SCEZZ or RC-KZ009SCEZZ or RC-KZ0106GEZZ or RC-KZ0311CEZZ	J	0.0033 AC250V Ceramic	AC
C212	VCEA0A1HW474M	J	0.47 50V EL.	AB	C710	VCKYPH3DB561K	J	560p 2000V Ceramic	AC
C220	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C717	VCKYPA2HB472K	J	4700p 500V Ceramic	AB
C301	VCCCCY1HH220J	J	22p 50V Ceramic	AA	△ C723	RC-EZ0724CEZZ or RC-EX0659CEZZ	J	100 160V EL.	AG
C302	VCKYCY1HB102K	J	1000p 50V Ceramic	AA	△ C725	RC-EZ0809CEZZ or RC-EX0724CEZZ	J	220 160V EL.	AL
C304	VCCCCY1HH220J	J	22p 50V Ceramic	AA	C727	VCKYPA2HB472K	J	100 160V EL.	
C305	VCKYCY1HB103K	J	0.01 50V Ceramic	AA	△ C730	VCEA0A1CW108M	J	4700p 500V Ceramic	AB
C354	VCEA0A1CW225M	J	2.2 50V EL.	AB	△ C731	VCEA0A1EW337M	J	1000 16V EL.	AD
C356	VCKYCY1HB332K	J	3300p 50V Ceramic	AA	C732	VCKYCY1HF103Z	J	330 25V EL.	AC
C357	VCEA0A1HW106M	J	10 50V EL.	AB	C736	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C358	VCEA0A1HW106M	J	10 50V EL.	AB	C737	VCEA0A1EW226M	J	0.01 50V Ceramic	AA
C361	VCEA0A1CW477M	J	470 16V EL.	AC	C738	RC-KZ0040CEZZ or RC-KZ0340CEZZ	J	22 25V EL.	AB
C411	VCEA0A1AW108M	J	1000 10V EL.	AC	C739	VCEA0A1HW104M	J	820p 2kV Ceramic	AD
C412	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	C740	VCEA0A1EW476M	J		
C414	VCEA0A1HW225M	J	2.2 50V EL.	AB	C742	VCKYPA2HB102K	J	0.1 50V EL.	AB
C416	VCEA0A1HW105M	J	1.0 50V EL.	AB	C743	VCKYPH3DB561K	J	47 25V EL.	AB
C418	VCEA0A1HW106M	J	10 50V EL.	AB	C744	VCKYPH3DB561K	J	1000p 500V Ceramic	AA
C451	VCQYTA1HM104K	J	0.1 50V Mylar	AC		RC-KZ0338CEZZ or RC-KZ0338CEZZ	J	560p 2000V Ceramic	AC
C454	VCEA0A1HW475M	J	4.7 50V EL.	AB	C750	VCKYCY1HF103Z	J		
C456	VCEA0A1HW106M	J	10 50V EL.	AB	C752	VCEA0A1CW476M	J	0.01 50V Ceramic	AA
C491	VCEA0A1CW107M	J	100 16V EL.	AC	C754	VCEA0A1CW476M	J	47 16V EL.	AB
C492	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	C758	VCEA0A2EW106M	J	10 250V EL.	AD
C510	VCEA0A1VW477M	J	470 35V EL.	AB	C760	VCEA0A1CW108M	J	1000 16V EL.	AD
C511	VCCSPA2HL180K	J	18p 500V Ceramic	AA	C764	VCKYPH3DB561K	J	560p 2000V Ceramic	AC
C512	VCFYSA1JB224J	X	0.22 63V			RC-KZ0338CEZZ or RC-KZ0338CEZZ	J		
C513	VCFYSA1JB473J	J	0.047 63V	AC	C765	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C514	VCEA0A1EW108M	J	1000 25V EL.	AD	C771	VCEA0A1CW476M	J	47 16V EL.	AB
C515	VCEA0A1HW475M	J	4.7 50V EL.	AB	C783	VCQYTA1HM103K	J	0.01 50V Mylar	AB
C516	VCKYCY1HB222K	J	2200p 50V Ceramic	AA	C784	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C517	VCEA0A1CW226M	J	22 16V EL.	AB	C801	VCCCCY1HH180J	J	18p 50V Ceramic	AA
C520	VCEA0A1HW107M	J	100 50V EL.	AB	C807	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C530	VCFYFA1HA334J	J	0.33 50V	AB	C808	VCEA0A1HW106M	J	10 50V EL.	AB
C531	VCFYFA1HA564J	J	0.56 50V	AB	C809	VCEA0A1HW105M	J	1.0 50V EL.	AB
C606	VCKYPA2HB561K	J	560p 500V Ceramic	AA	C811	VCKYCY1CB473K	J	0.047 16V Ceramic	AA
C607	VCKYPA1HB472K	J	4700p 50V Ceramic	AA	C812	VCEA0A1HW474M	J	0.47 50V EL.	AB
C608	VCKYPA2HB331K	J	330p 500V Ceramic	AA	C901	VCEA0A1HW105M	J	1.0 50V EL.	AB
△ C610	RC-FZ1019CEZZ	X	13500p 1.6kV Plastic		C925	VCEA0A1HW106M	J	10 50V EL.	AB
C612	VCFPVC2DB474J	J	0.47 200V Metalized Polypro Film	AE	C1401	VCEA0A1HW106M	J	10 50V EL.	AB
C632	VCKYCY1EB153K	J	0.015 25V Ceramic	AA	C1402	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C633	VCEA0A1AW337M	X	330 10V EL.		C1403	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C634	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	C1404	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C635	VCEA0A1HW105M	J	1.0 50V EL.	AB	C1405	VCEA0A1HW106M	J	10 50V EL.	AB
C637	VCEA0A1CW476M	J	47 16V EL.	AB	C1406	VCEA0A1HW106M	J	10 50V EL.	AB
C638	VCEA0A1AW477M	J	470 10V EL.	AC	C1407	VCEA0A1CW476M	J	47 16V EL.	AB
C652	VCEA0A1HW475M	J	4.7 50V EL.	AB	C1434	VCEA0A1HW106M	J	10 50V EL.	AB
C653	VCEA0A1HW105M	J	1.0 50V EL.	AB	C1435	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C654	VCKYCY1AB224K	J	0.22 10V Ceramic	AB	C2001	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C662	VCEA0A1CW477M	J	470 16V EL.	AC	C2002	VCCCCY1HH101J	J	100p 50V Ceramic	AA
△ C701	RC-FZ037SCEZZ or RC-FZ012SGEZZ or RC-FZ017SCEZZ or RC-FZ029SCEZZ	J	0.22 AC250V Plastic	AD	C2040	VCEA0A1AW107M	J	100 10V EL.	AB
C702	RC-KZ0029CEZZ or RC-KZ0016CEZZ	J	0.01 AC250V Ceramic	AC	C2041	VCEA0A1HW105M	J	1.0 50V EL.	AB
C703	RC-KZ0029CEZZ or RC-KZ0016CEZZ	J	0.01 AC250V Ceramic	AC	C2060	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
△ C705	RC-EZ0800CEZZ or RC-EZ1336CEZZ or RC-EZ0719CEZZ or RC-EZ1022CEZZ or RC-EZ0799CEZZ	X	560 200V EL.		C2061	VCKYCY1HB222K	J	2200p 50V Ceramic	AA
					C2062	VCEA0A1AW107M	J	100 10V EL.	AB
					C2201	VCKYCY1HB682K	J	6800p 50V Ceramic	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
<b>PWB-A: DUNTKA450WEV2</b>									
<b>MAIN UNIT (Continued)</b>									
C2202	VCCSPA1HL151J	J	150p 50V Ceramic	AA	R305	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
C2601	VCEA0A1CW476M	J	47 16V EL.	AB	R306	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
	or				R308	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
	VCEA0A1HW475M	J	4.7 50V EL.	AB	R353	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C3001	VCEA0A1HW475M	J	4.7 50V EL.	AB	R354	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
C3002	VCKYCY1HB562K	J	5600p 50V Ceramic	AA	R355	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C3003	VCKYCY1HB123K	J	0.012 50V Ceramic	AB	R357	VRS-CY1JF822J	J	8.2k 1/16W M-Ox.	AA
C3004	VCEA0A1HW105M	J	1.0 50V EL.	AB	R401	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
C3005	VCEA0A1HW475M	J	4.7 50V EL.	AB	R402	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
C3006	VCEA0A1HW106M	J	10 50V EL.	AB	R403	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
C3007	VCEA0A1HW475M	J	4.7 50V EL.	AB	R404	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
C3008	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	R411	VRS-CY1JF684J	J	680k 1/16W M-Ox.	AA
C3009	VCEA0A1CW227M	J	220 16V EL.	AC	R412	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
C3010	VCEA0A1HW475M	J	4.7 50V EL.	AB	R413	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
C3011	VCEA0A1HW475M	J	4.7 50V EL.	AB	R414	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C3012	VCEA0A1HW475M	J	4.7 50V EL.	AB	R426	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C3013	VCKYCY1HB272K	J	2700p 50V Ceramic	AA	R427	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C3014	VCKYCY1CB473K	J	0.047 16V Ceramic	AA	R431	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
C3015	VCEACA1HC335K	X	3.3 50V EL.		R432	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
C3016	VCEA0A1HW475M	J	4.7 50V EL.	AB	△ R451	VRS-RG2HC103J	J	10k 1/2W M-Ox.	AA
C3017	VCEACA1CC106K	J	10 16V EL.	AC	R453	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
C3018	VCEA0A1HW105M	J	1.0 50V EL.	AB	R454	VRD-RM2HD184J	J	180k 1/2W Carbon	AA
C3374	VCEA0A1HW225M	J	2.2 50V EL.	AB	R455	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
C3376	VCKYCY1HB332K	J	3300p 50V Ceramic	AA	R456	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
C3501	VCEA0A1HW106M	J	10 50V EL.	AB	R457	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
C3502	VCEA0A1HW475M	J	4.7 50V EL.	AB	R458	VRD-RA2EE564J	J	560k 1/4W Carbon	AA
C3503	VCEA0A1HW475M	J	4.7 50V EL.	AB	R461	VRS-CY1JF274J	J	270k 1/16W M-Ox.	AA
<b>RESISTORS</b>					R462	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
<i>[M-Ox. ... Metal Oxide, M-Film ... Metal Film]</i>					R491	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
RJ1	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R492	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
RJ2	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R493	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
RJ3	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R494	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
RJ4	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R496	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
RJ5	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R497	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
RJ10	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R512	VRD-RM2HD102J	J	1.0k 1/2W Carbon	AA
RJ23	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R513	VRD-RM2HD102J	J	1.0k 1/2W Carbon	AA
RJ24	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R514	VRD-RM2HD1R0J	J	1.0 1/2W Carbon	AA
RJ26	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R515	VRS-RG3DB271J	X	270 2W M-Ox.	
RJ30	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R516	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
RJ37	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R517	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
RJ42	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R518	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
RJ47	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R519	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
RJ50	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R520	VRN-RL3AB1R0J	X	1.0 1W M-Film	
RJ52	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R522	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
RJ53	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R525	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
RJ58	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R527	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
RJ59	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	R529	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA
△ R53	VRS-RG3LB223J	X	22k 3W M-Ox.		△ R604	VRS-RG3LB472J	X	4.7k 3W M-Ox.	
R54	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	R605	VRD-RA2BE121J	J	120 1/8W Carbon	AA
R55	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	R606	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R56	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA	△ R607	VRS-RG3LB472J	X	4.7k 3W M-Ox.	
R57	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA	△ R609	VRS-RG3AB562J	X	5.6k 1W M-Ox.	
R58	VRD-RA2BE1R0J	J	1.0 1/8W Carbon	AA	R610	VRD-RM2HD220J	J	22 1/2W Carbon	AA
R101	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA	△ R611	VRS-KA3NG3R3K	J	3.3 7.0W M-Ox.	AD
R102	VRS-CY1JF100J	J	10 1/16W M-Ox.	AA	R612	VRS-RG2HC102J	J	1.0k 1/2W M-Ox.	AA
R201	VRS-CY1JF151J	J	150 1/16W M-Ox.	AA	△ R621	VRN-RL3DB1R2J	X	1.2 2W M-Film	
R202	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA	R622	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R203	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA	R623	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R204	VRS-CY1JF270J	J	27 1/16W M-Ox.	AA	R624	VRN-RA2BK472F	J	4.7k 1/8W M-Film	AA
R205	VRS-CY1JF331J	J	330 1/16W M-Ox.	AA	R634	VRD-RM2HD121J	J	120 1/2W Carbon	AA
R206	VRD-RA2EE151J	J	150 1/4W Carbon	AA	R635	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R207	VRD-RA2BE273J	J	27k 1/8W Carbon	AA	R636	VRD-RA2EE221J	J	220 1/4W Carbon	AA
R209	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	△ R641	VRS-RG3AB682J	X	6.8k 1W M-Ox.	
R210	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA	△△ R651	VRS-RG2HC270J	X	27 1/2W M-Ox.	
R211	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA	△△ R653	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R212	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA	△△ R654	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
R220	VRS-CY1JF331J	J	330 1/16W M-Ox.	AA	△△ R655	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R301	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA	R656	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA
R302	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA	R657	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA
R304	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA	R658	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
					R659	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
					△ R661	VRN-RL3ABR47J	X	0.47 1W M-Film	
					△ R701	RR-DZ0049CEZZ	J	3.9M 1/2W Carbon	AB
						or			
						RR-HZ0048CEZZ			



Ref. No.	Part No.	★	Description	Code
<b>PWB-A: DUNTKA450WEV2</b>				
<b>MAIN UNIT (Continued)</b>				
R703	VRW-KQ3NC1R2K	J	1.2 7.0W Cement	AE
△ R705	VRN-RL3ABR33J	X	0.33 1W M-Film	
△ R706	VRN-RL3ABR22J	X	0.22 1W M-Film	
R707	VRD-RM2HD270J	J	27 1/2W Carbon	AA
R708	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R710	VRS-RG2HC103J	J	10k 1/2W M-Ox.	AA
R711	VRD-RA2BE334J	J	330k 1/8W Carbon	AA
R712	VRD-RA2BE100J	J	10 1/8W Carbon	AA
R713	VRS-RG2HC122J	X	1.2k 1/2W M-Ox.	
R715	VRD-RA2BE150J	J	15 1/8W Carbon	AA
△ R716	VRS-RG3AB121J	X	120 1W M-Ox.	
R731	VRS-SV2HC821J	J	820 1/2W M-Ox.	AA
R733	VRS-SV2HC332J	J	3.3k 1/2W M-Ox.	AA
△ R736	VRS-SV2HC222J	J	2.2k 1/2W M-Ox.	AA
△ R737	VRN-RL3ABR39J	X	0.39 1W M-Film	
	or			
	VRN-RL3DBR39J	X	0.39 2W M-Film	
R740	VRD-RM2HD470J	J	47 1/2W Carbon	AA
△ R744	VRN-RL2HCR68J	X	0.68 1/2W M-Film	
R745	VRD-RA2BE393J	J	39k 1/8W Carbon	AA
R746	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
R747	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R748	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R752	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
△ R758	VRS-RG2HC100J	X	10 1/2W M-Ox.	
△ R773	VRS-RG3LB270J	X	27 3W M-Ox.	
△ R774	VRS-RG3LB680J	X	68 3W M-Ox.	
R801	VRD-RM2HD470J	J	47 1/2W Carbon	AA
R807	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R808	VRS-CY1JF272J	J	2.7k 1/16W M-Ox.	AA
R809	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
R810	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
R901	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R925	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R926	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R961	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R962	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R1401	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R1402	VRS-CY1JF750J	J	75 1/16W M-Ox.	AA
R1403	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R1404	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R1405	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R1408	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R1409	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R1414	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R1415	VRD-RA2BE100J	J	10 1/8W Carbon	AA
R1416	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R1426	VRD-RA2BE750J	J	75 1/8W Carbon	AA
R1428	VRD-RA2BE750J	J	75 1/8W Carbon	AA
R1429	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R1430	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R2001	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2002	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2003	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2004	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2005	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2008	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R2009	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2010	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2016	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2018	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2020	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
R2022	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R2023	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2024	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2025	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2026	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2027	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2028	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R2029	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2032	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R2033	VRS-CY1JF684J	J	680k 1/16W M-Ox.	AA

Ref. No.	Part No.	★	Description	Code
<b>PWB-A: DUNTKA450WEV2</b>				
<b>MAIN UNIT (Continued)</b>				
R2034	VRS-CY1JF684J	J	680k 1/16W M-Ox.	AA
R2040	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R2041	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R2042	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2043	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R2044	VRS-CY1JF683J	J	68k 1/16W M-Ox.	AA
R2045	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R2047	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R2048	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
R2049	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R2060	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R2061	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
R2062	VRS-CY1JF183J	J	18k 1/16W M-Ox.	AA
R2063	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R2064	VRD-RA2BE391J	J	390 1/8W Carbon	AA
R2065	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R2067	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2068	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2069	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2070	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2072	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2101	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2102	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2201	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2202	VRS-CY1JF473J	J	47k 1/16W M-Ox.	AA
R2203	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R2211	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R2212	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R2213	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2401	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R2402	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R2403	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2404	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2501	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA
R2503	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA
R2504	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA
R2505	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
R2506	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
R2507	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA
R2508	VRS-CY1JF153J	J	15k 1/16W M-Ox.	AA
R2509	VRS-CY1JF272J	J	2.7k 1/16W M-Ox.	AA
R2601	VRD-RA2BE100J	J	10 1/8W Carbon	AA
	or			
	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R2603	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R2605	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R2608	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R3001	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R3002	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R3003	VRS-CY1JF105J	J	1M 1/16W M-Ox.	AA
R3004	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R3005	VRS-CY1JF623J	J	62k 1/16W M-Ox.	AA
R3007	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R3008	VRS-CY1JF302J	J	3.0k 1/16W M-Ox.	AA
R3010	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA
R3011	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R3012	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R3013	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R3014	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R3374	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R3375	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
R3377	VRS-CY1JF822J	J	8.2k 1/16W M-Ox.	AA
R3378	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
R3379	VRD-RA2BE683J	J	68k 1/8W Carbon	AA
R3501	VRS-CY1JF750J	J	75 1/16W M-Ox.	AA
R3502	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R3503	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R3504	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R3507	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R3508	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA



Ref. No.	Part No.	★	Description	Code
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## PWB-A: DUNTKA450WEV2

### MAIN UNIT (Continued)

#### SWITCHES

S2501	QSW-K0202PEZZ	R	Power	AC
	or			
	QSW-K0079GEZZ			
S2502	QSW-K0202PEZZ	R	VOL-Down	AC
	or			
	QSW-K0079GEZZ			
S2503	QSW-K0202PEZZ	R	VOL-Up	AC
	or			
	QSW-K0079GEZZ			
S2504	QSW-K0202PEZZ	R	CH-Down	AC
	or			
	QSW-K0079GEZZ			
S2505	QSW-K0202PEZZ	R	CH-Up	AC
	or			
	QSW-K0079GEZZ			

#### MISCELLANEOUS PARTS

F701	QFS-B4023CEZZ	J	Fuse 4A/125V	AC
	or			
	QFS-B4021GEZZ			
FB351	RBLN-0047CEZZ	J	Balun	AB
FB601	RBLN-0047CEZZ	J	Balun	AB
FB751	RBLN-0047CEZZ	J	Balun	AB
FH701	QFSDH1013CEZZ	J	Fuse Holder	AC
FH702	QFSDH1014CEZZ	J	Fuse Holder	AC
J1404	QSOCD0430CEZZ	J	Socket	AE
P303	QPLGN0461CEZZ	J	Plug, 4-pin (S)	AB
P401	QPLGN0561CEZZ	J	Plug, 5-pin (GBN)	AB
P601	QPLGN0160FJZZ	J	Plug, 5-pin (K)	AD
P651	QPLGN0361CEZZ	J	Plug, 3-pin (TP651-3)	AB
P701	QPLGN0260CEZZ	J	Plug, 2-pin (M)	AC
P751	QPLGN0461CEZZ	J	Plug, 4-pin (YBN)	AB
P1401	QPLGN0561CEZZ	J	Plug, 5-pin (HA)	AB
P2001	QPLGN0561CEZZ	J	Plug, 5-pin (TP2001-5)	AB
RMC2601	RRMCU0222CEZZ	J	R/C Receiver	AL
	or			
	RRMCU0227CEZZ			
	or			
	RRMCU0235CEZZ			

*I		Q222CE	Q227CE	Q235CE
COMB NATION	R2608	USE	—	USE
	R2602	—	—	USE
	R2603	USE	—	—
	R2604	—	—	USE
	R2605	USE	USE	—
	R2606	—	USE	—
	R2607	—	USE	—
	R2601	10	330	330
	C2601	47 $\mu$ (16V)	4.7 $\mu$ (50V)	4.7 $\mu$ (50V)

RDA501	PRDAR0280PEFW	R	Heat Sink	AF
RDA604	PRDAR0233PEFW	R	Heat Sink	AK
RDA701	PRDAR0265PEFW	R	Heat Sink	AD
TAN3351	QTANJ0339CEZZ	X	Terminal	
	or			
	QTANJ0323CEZZ			
	TLABN0101GJZZ	X	Label	
	LX-BZ3049GEFD	J	Screw	AA
	LX-BZ3049GEFD	J	Screw	AA
	LX-BZ3100CEFD	J	Screw	AA
	LX-TZ3004CEFD	J	Screw	AA

Ref. No.	Part No.	★	Description	Code
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## PWB-B: DUNTK9510WEW3

### CRT UNIT

#### TRANSISTORS

Q851	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q852	VS2SC3789//2E	J	2SC3789	AF
	or			
	VS2SC3619LB1E			
Q853	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q854	VS2SC3789//2E	J	2SC3789	AF
	or			
	VS2SC3619LB1E			
Q855	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q856	VS2SC3789//2E	J	2SC3789	AF
	or			
	VS2SC3619LB1E			
Q881	VS2SA1266-Y-1	J	2SA1266(Y)	AA

#### DIODES

D881	VHD1SS119//1	J	Diode	AB
D882	VHD1SS119//1	J	Diode	AB
D884	VHD1SS119//1	J	Diode	AB

#### COIL

L851	VP-MK820K0000	J	Peaking 82 $\mu$ H	AB
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#### CAPACITORS

[EL... Electrolytic]

C851	VCCSPA1HL391J	J	390p 50V	Ceramic	AA
C852	VCCSPA1HL331J	J	330p 50V	Ceramic	AA
C853	VCCSPA1HL391J	J	390p 50V	Ceramic	AA
C854	RC-KZ0024CEZZ	J	0.001 2kV	Ceramic	AC
	or				
	VCKYPB3DE472Z	J	0.0047 2kV	Ceramic	AC
C883	VCEA0A1HW106M	J	10 50V	EL.	AB

#### RESISTORS

[M-Ox... M-Ox.]

R851	VRD-RA2BE470J	J	47 1/8W	Carbon	AA
R852	VRD-RA2BE181J	J	180 1/8W	Carbon	AA
R853	VRD-RA2BE121J	J	120 1/8W	Carbon	AA
R855	VRD-RA2BE471J	J	470 1/8W	Carbon	AA
R856	VRD-RA2BE221J	J	220 1/8W	Carbon	AA
△ R857	VRS-VV3LB123J	J	12k 3.0W	M-Ox.	AB
R858	VRD-RM2HD222J	J	2.2k 1/2W	Carbon	AA
R859	VRD-RA2BE470J	J	47 1/8W	Carbon	AA
R860	VRD-RA2BE181J	J	180 1/8W	Carbon	AA
R861	VRD-RA2BE121J	J	120 1/8W	Carbon	AA
R863	VRD-RA2BE471J	J	470 1/8W	Carbon	AA
R864	VRD-RA2BE221J	J	220 1/8W	Carbon	AA
△ R865	VRS-VV3LB123J	J	12k 3.0W	M-Ox.	AB
R866	VRD-RM2HD222J	J	2.2k 1/2W	Carbon	AA
R867	VRD-RA2BE470J	J	47 1/8W	Carbon	AA
R868	VRD-RA2BE181J	J	180 1/8W	Carbon	AA
R869	VRD-RA2BE121J	J	120 1/8W	Carbon	AA
R871	VRD-RA2BE471J	J	470 1/8W	Carbon	AA
R872	VRD-RA2BE221J	J	220 1/8W	Carbon	AA
△ R873	VRS-VV3LB123J	J	12k 3.0W	M-Ox.	AB
R874	VRD-RM2HD222J	J	2.2k 1/2W	Carbon	AA
R881	VRD-RA2BE102J	J	1.0k 1/8W	Carbon	AA
R882	VRD-RA2BE331J	J	330 1/8W	Carbon	AA
R883	VRD-RA2BE561J	J	560 1/8W	Carbon	AA
R884	VRD-RA2BE152J	J	1.5k 1/8W	Carbon	AA
R895	VRD-RA2BE470J	J	47 1/8W	Carbon	AA

#### MISCELLANEOUS PARTS

P851	QPLGN0541CEZZ	J	Plug, 5-pin (GBN)	AB
P852	QPLGN0441CEZZ	J	Plug, 4-pin (YBN)	AB
SC851	QSOCV0937CEZZ	J	CRT Socket	AL

Ref. No.	Part No.	★	Description	Code
<b>PWB-H: DUNTK9310WEW7</b>				
<b>FRONT A/V UNIT</b>				
<b>MISCELLANEOUS PARTS</b>				
J1001	QJAKE0053GEZZ	J	Jack, Video-In	AD
J1002	QJAKE0055GEZZ	J	Jack, Audio-In (L)	AD
J1003	QJAKE0059GEZZ	J	Jack, Audio-In (R)	AC
P1001	QPLGN0541CEZZ	J	Plug, 5-pin (HA)	AB

Ref. No.	Part No.	★	Description	Code
<b>SUPPLIED ACCESSORIES</b>				
	RRMCG1626CESA	X	Infrared R/C Unit	
	TGAN-0001GJZZ	X	Guarantee Card	
	TiNS-7414GJZZ	X	Operation Manual	

<b>MISCELLANEOUS PARTS</b>				
△ ACC701	QACCD3064CESA	J	AC Cord	AM
	or			
	QACCD3090CESA			
	or			
	QACCD3096CESA			
	VSP0080PBL4YS	X	Speaker x 2, 32 ohm	
	QCNW-0130MEZZ	X	Connecting Cord	
	QCNW-0134MEZZ	X	Connecting Cord	
	QCNW-0166MEZZ	X	Connecting Cord	
	QCNW-0167MEZZ	J	Connecting Cord	AE

<b>PACKING PARTS</b> <b>(NOT REPLACEMENT ITEM)</b>				
	SPAKC0151GJZZ	—	Packing Case	—
	SPAKP0109GJZZ	—	Polyethylene Sheet	—
	SPAKX0165MEZZ	—	Buffer Material	—
	SSAKA0101GJZZ	—	Polyethylene Bag	—

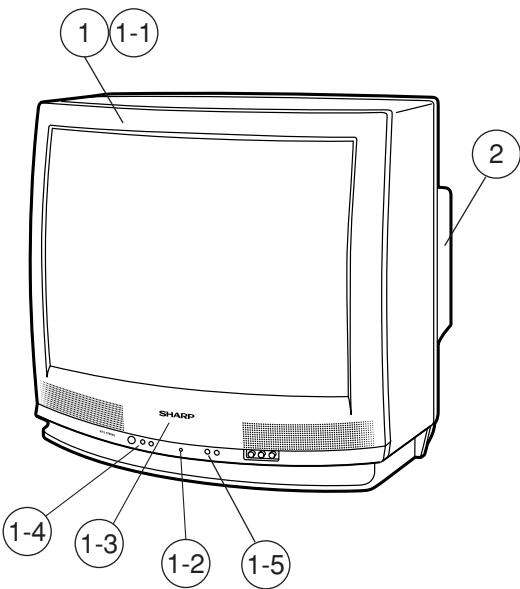
Ref. No.	Part No.	★	Description	Code
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CABINET PARTS

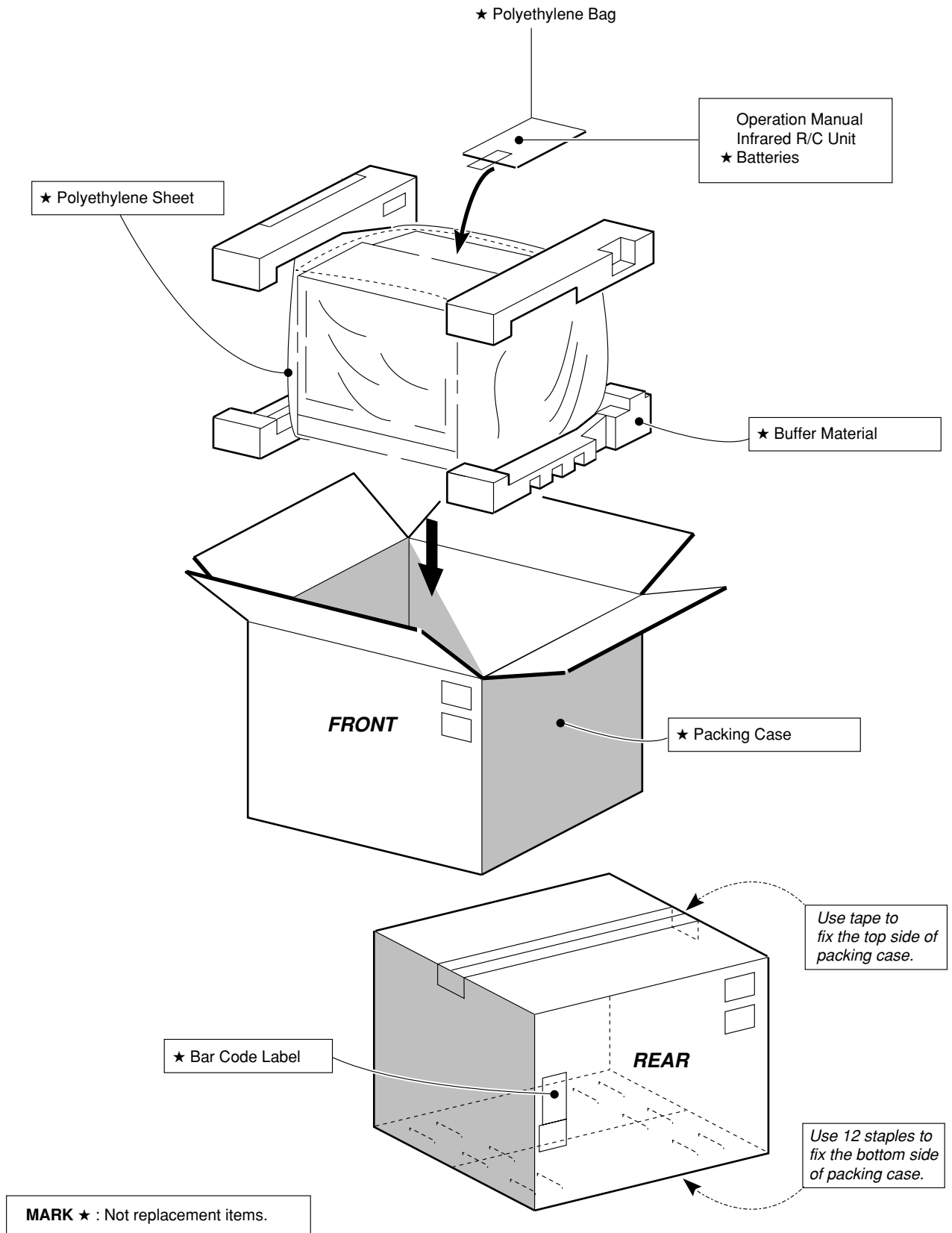
1	CCABA1325WEV5	X	Front Cabinet Ass'y	
1-1	Not Available	—	Front Cabinet	—
1-2	GCOVA1033MEKA	X	Cover for R/C	
1-3	HBDGB1009MESB	X	"SHARP" Badge	
1-4	JBTN-1096MEKA	X	Button, Power, Vol-up/down	
1-5	JBTN-1097MEKA	X	Button, CH-up/down	
2	GCABB1157MEKA	X	Rear Cabinet	

Ref. No.	Part No.	★	Description	Code
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CABINET PARTS LOCATION



# PACKING OF THE SET



# SHARP

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